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COUNTY OF SANTA CLARA

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

CALIFORNIA RESTAURANT
ASSOCIATION,

Plaintiffs,

vs.

THE COUNTY OF SANTA CLARA and
THE SANTA CLARA COUNTY
PUBLIC HEALTH DEPARTMENT,

Defendants.

Case No. C08-03685 CW

**DECLARATION OF MARY T.
BASSETT MD, MPH, IN SUPPORT OF
SANTA CLARA COUNTY'S
OPPOSITION TO PLAINTIFF'S
MOTION FOR DECLARATORY
RELIEF AND A PRELIMINARY
INJUNCTION**

Hearing Date: August 28, 2008

Time: 2:00 p.m.

Place: Ctrm. 2, 4th Fl.

1 Mary T. Bassett MD, MPH, hereby declares under penalty of perjury:

2 1. I am Deputy Commissioner of Health Promotion and Disease Prevention at the
3 Department of Health and Mental Hygiene (the "Department") of the City of New York. I have held
4 this position since 2002. My *curriculum vitae* is attached to this declaration as Exhibit 1. I have over
5 20 years of experience in public health, ranging from community work to health services research,
6 teaching, development of law and policy and advocacy. As such, I have overseen the implementation
7 and evaluation of Health Code § 81.50, which mandates that chain restaurants in New York City
8 disclose calorie information. I am submitting this declaration in opposition to the motion by the
9 California Restaurant Association for Declaratory Relief and a Preliminary Injunction against Santa
10 Clara County's Menu Labeling Ordinance No. 300.793.

11 2. The New York City Department of Health and Mental Hygiene proposed that the New
12 York City Board of Health enact Health Code § 81.50 as part of the City of New York's response to
13 the obesity epidemic, which led to more than a 70% increase in the prevalence of obesity in New
14 York City between 1994 and 2004 and a more than twofold increase in diabetes since 1993.^{1,2} The
15 purpose of Health Code § 81.50 is to inform consumer choice by giving consumers in chain
16 restaurants access to calorie information at the time they are making their food and beverage choices.
17 Prior to its adoption, consumers at New York City chain restaurants did not have access to such
18 information at point of purchase and extensive evidence demonstrates that consumers, and even
19 nutrition experts, grossly underestimate the calorie content of food.^{3,4,5,6,7,8} Consumers lacked tools to
20

21 ¹ NYC DOHMH. Community Health Survey. <http://query1.health.nycnet/query/>. Accessed
22 February 7, 2008.

23 ² Thorpe LE, Mostashari F, Berger DK, Cobb LK, Helgerson SD, Frieden TR. Diabetes is
24 Epidemic. *NYC Vital Signs* NYCDOHMH. 2003;2(1).

25 ³ Wansink B, Chandon P. Meal size, not body size, explains errors in estimating the calorie
26 contents of meals. *Ann Int Med* 2006; 145: 326-332.

27 ⁴ Chandon P, Wansink B. The biasing health halos of fast-food restaurant health claims:
28 lower calorie estimates and higher side-dish consumption intentions. *Journal of Consumer Research*
2007; 34:301-314.

⁵ Young LR, Nestle M. Portion sizes and obesity: Responses of fast-food companies. *Journal*
of Public Health Policy 2007; 28:238-248.

1 make informed decisions about their food choices that would help them avoid the unhealthy weight
2 gain that fuels the twin epidemics of obesity and diabetes.

3 3. Health Code § 81.50 was adopted in its current form by the Board of Health in January
4 2008. It requires any restaurant that is one of “a group of fifteen or more food service establishments
5 doing business nationally, and offering for sale substantially the same menu items” to post calorie
6 information on its menus and menu boards. Health Code § 81.50 was to have become effective on
7 March 31, 2008, but the New York State Restaurant Association (“NYSRA”) brought a lawsuit
8 challenging it on grounds similar to those raised in this lawsuit by the California Restaurant
9 Association, and the City of New York agreed to delay its enforcement of Health Code § 81.50 until
10 April 21, 2008. On April 16, 2008, United States District Judge Richard Holwell issued a decision
11 ruling against the NYSRA, and on April 18, 2008 he denied the NYSRA’s application for a
12 temporary injunction. The NYSRA appealed to the Second Circuit Court of Appeals. On April 29,
13 2008, that Court denied the NYSRA’s motion for a stay of enforcement pending appeal conditioned
14 on the City of New York agreeing that, while it would enforce Health Code § 81.50 in the interim, it
15 would not seek monetary fines against non-compliant restaurants through July 18, 2008. The appeal
16 was argued on June 12, 2008 and is *sub judice*. On June 16, 2008, the Second Circuit denied
17 NYSRA’s motion to extend the “no fine” period beyond July 18, 2008. On July 19, 2008, the City of
18 New York began seeking monetary fines for violations of Health Code § 81.50.

19 The New York City experience provides several key lessons:

- 20 • Posting of calories should be prominent and at the point of purchase.
- 21 • Posting of calories by chain restaurants on menus and menu boards is feasible
- 22 • Posting of calories is positively received by consumers

23 (footnote continued from previous page)

24 ⁶ J. Backstrand, et al., *Fat Chance* Washington, DC: Center for Science in the Public Interest, 1997.

25 ⁷ Field Research Corporation telephone survey of 523 registered California voters, conducted March 20 – 31, 2007. Accessed October 11, 2007 at <http://www.publichealthadvocacy.org/menulabelingpoll.html>

26 ⁸ Burton S. Creyer EH. et al. Attacking the obesity epidemic: the potential health benefits of
27 providing nutrition information in restaurants. *American Journal of Public Health*. 2006; 96(9):1669-1675.

- Posting of calories leads to more informed choice by consumers
- Posting of calories is associated with an increase in healthy offerings by restaurants

In this declaration I will briefly address each of these points.

4. Posting of calories should be prominent and at the point of purchase

A survey of NYC chain restaurants, conducted by the Department prior to the Health Code § 81.50, showed that with the exception of one chain, less than 5% of customers saw *any* calorie information while purchasing their selections. The exception was Subway, where some calorie information was posted on the display case near the cash register. Nearly one third of Subway customers saw the calorie information so placed. These data suggest that to assure that calorie posting is sufficiently prominent to be observed by patrons, information must be placed near the point of purchase. Various chain restaurants echoed the importance of the menu board as the most important source of consumer information in the restaurant, referring to it as “prime real estate.” Other strategies, such as placing calorie information in brochures, on tray liners, on food wrappings, etc. simply were not observed by the vast majority of consumers.

5. Posting of calories by chain restaurants on menus and menu boards is feasible

Nothing more clearly shows the feasibility of calorie posting than a walk around New York City. The majority of food service establishments covered by Health Code § 81.50 have posted calories, although a number of chains did not post until July 18, 2008, which was the day before the City of New York began to seek fines against restaurants that failed to post. Chains that are currently posting calories in New York City include at least:

- McDonald’s
- Burger King
- Pizza Hut
- Dunkin Donuts
- Starbucks
- Subway
- Quiznos
- Chipotle
- Cosi
- Cheesecake Factory
- Hale and Hearty
- Pret a Manger
- Jamba Juice
- Au Bon Pain
- Clearview Cinemas
- Nathans

- Auntie Anne's
- Tasti D Lite
- Dunkin' Donuts
- Baskin Robbins

During the public comment period, a number of chains insisted that implementation of the rule would be difficult or impossible. But, contrary to these claims, menu boards in New York City now have calorie information. Restaurants have used a wide range of formats to present the information, generally preserving the basic styles of their menus. As of July 21, 2008, the Department has consulted with 74 restaurant chains about how to post their information in full compliance with the rule. In general, the designs submitted by these restaurant chains have demonstrated a wide variety of attractive menu formats that continue to effectively present their menu items, while also clearly communicating calorie information to consumers. Photos of menus from chains which are currently posting in NYC and which have sought to comply with the law are attached as Exhibit 2.

6. Calorie labeling is widely supported by consumers and health organizations

When its adoption was being considered by the Board of Health, support for Health Code § 81.50 came from a wide range of community and health organizations, including the American Diabetes Association, the American Cancer Society, and the American Academy of Pediatrics, among others. In response to the lawsuits brought by the NYSRA, supportive amicus briefs were submitted by the American Medical Association, the American Public Health Association, and the American Diabetes Association, among others.

Consumer polls have shown increasing support for calorie labeling in restaurants. In 2003, 74% reported being in favor of calorie labeling. By 2004, 80% of those polled were in favor of this type of intervention.⁹

Since implementation, New York City press reports demonstrate a positive consumer response, with frequent reports of "sticker shock" at the calorie content of many items. AM New York, a free local morning paper reported on July 7, 2008, "*I go for the low-fat coffee cake instead of*

⁹ Brownell, K.D. (2005). The chronicling obesity: Growing awareness of its social, economic, and political contexts. *Journal of Health Politics, Policy and Law*, 30, 955-964

the regular cake, and it's a difference of like 150 calories,' said Robb Martinez, 38, of Williamsburg, of his usual Starbucks order." A full copy of the July 7, 2008 AM New York article "Hard to Stomach: Fast-food calorie listings are changing what New Yorkers eat" is attached as Exhibit 3.

7. Posting calorie information at the point of purchase has been associated with changes in menu items, with reformulation to make offerings healthier

There are three potential benefits of calorie posting. First, some consumers will use information to select lower calorie menu items. Second, irrespective of their selections, consumers will simply be better informed about the foods they are purchasing. Third, disclosure of calorie information at the point of purchase will prompt chains to reformulate both the portion size and calorie content of their offerings.

Recent changes in restaurant offerings suggest that the introduction of calorie labeling has spurred introduction of lower calories options, likely in response to mandated calorie labeling and enhanced consumer demand for such selections. These include both the addition of new, lower calorie menu items, and the reformulation of existing items, as shown in Table 1.

Table 1: Menu Additions - Examples of new, healthier options introduced since 3/2007*

Food Type	Healthier Option
<u>Sandwich</u>	<u>Quizno's</u> <ul style="list-style-type: none"> Small flatbread sandwiches called "Sammies" has two 200 calorie options <u>Au Bon Pain</u> <ul style="list-style-type: none"> "Eat Better – Portions" menu includes small servings of fruit, nuts, vegetables, etc. that are 70-200 calories each (e.g. chickpea and tomato salad; cheese, fruit and crackers)
<u>Coffee</u>	<u>Starbucks</u> <ul style="list-style-type: none"> Addition of smaller, "Short" size (8 oz) "Skinny Latte" made from skim milk and sugar-free syrup promoted
<u>Ice Cream</u>	<u>Carvel</u> <ul style="list-style-type: none"> Specialty blended coffees available in light option "Artic Blender" ice cream drink available in light option

*Information from online company nutritional guides accessed March 2007 and June 2008.

Further, nutrition information provided on company websites posted in March 2007 (before calorie posting) compared with information posted in June 2008 (when the implementation had

1 begun) shows a number of items now have lower calorie content (Table 2). These changes were not
 2 announced by companies and apparently went unnoticed by the public, but will help contribute to
 3 reduced population caloric intake. For example, a consumer who has a doughnut for breakfast and a
 4 chicken sandwich with french fries for lunch, could purchase 250 fewer calories – perhaps enough to
 5 keep weight stable versus gaining more added pounds. Such small changes are important. A 200
 6 calorie per day increase in intake over the past decades is sufficient to account for the obesity
 7 epidemic.¹⁰

8 **Table 2: Examples of reformulations of chain restaurant food before (March 2007) and after**
 9 **(June 2008) the calorie posting requirement in New York City^{1,2}**

Brand and Item Name	Calories			
	March- 2007	June- 2008	Change	% Change
Au Bon Pain				
Hot chocolate (large)	670	600	-70	-10.4
Hot chocolate (small)	410	350	-60	-14.6
Dunkin' Donuts				
Glazed cake stick	490	360	-130	-26.5
Plain cake stick	420	310	-110	-26.2
Glazed chocolate cake stick	470	370	-100	-21.3
Plain croissant	330	270	-60	-18.2
Kentucky Fried Chicken				
Boneless fiery buffalo wings	530	420	-110	-20.8
Sweet & spicy wings	460	400	-60	-13.0
Tender roast sandwich (w/ sauce)	430	380	-50	-11.6
McDonalds				
French fries (large)	570	500	-70	-12.3
Grilled chicken ranch BLT sandwich	520	470	-50	-9.6
Starbucks				
Blueberry muffin	400	320	-80	-20.0
Crispy square	450	440	-10	-2.2
Taco Bell				
Southwest steak border bowl	690	600	-90	-13.0
Wendy's				
Chicken club	650	540	-110	-16.9
Crispy chicken sandwich	380	330	-50	-13.2
Jr cheeseburger deluxe	360	300	-60	-16.7
Jr hamburger	280	230	-50	-17.9

24 ¹ Information from online company nutritional guides accessed March 2007 and June 2008.

25 ² Some restaurants also launched new higher calorie products during the same time period such as Wendy's "Baconator"
 (which contains 840 calories)

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 27 ¹⁰ Nielsen SJ, Siega-Riz AM, Popkin BM. Trends in energy intake in the United States
 between 1977-1996: Similar shifts seen across all age groups. Obesity Research 10:370-378 (2002)

Press reports also support the conclusion that chains are reformulating to achieve lower calorie counts: *"In the fall we will be offering an expanded line of nutritional menu options,"* AM New York quoted Starbucks as having informed them.¹¹ See Exh. 3.

These trends were also noted in a recent article in the Wall Street Journal, which reported:

Some restaurants have had their own sticker shock and started offering lighter options. Così had a nutritionist look for ways to save on every item. Switching to low-fat mayo brought the Così Club from nearly 800 calories to 447. Così's popular Signature Salad (with gorgonzola, grapes, pears, pistachios, dried cranberries and roasted sherry shallot vinaigrette) goes from 611 calories to 371 with reduced-fat dressing and half the cheese. 'Having to post this information in New York really focused us on paying attention as well,' says Chris Carroll, the chain's chief marketing officer.¹²

A full copy of the July 29, 2008 Wall Street Journal article "On the table: the Calories Lurking in Restaurant Food" is attached as Exhibit 4.

8. Calorie labeling is leading consumers to make more informed, healthier choices

In the Department study cited earlier, conducted prior to the implementation of Health Code § 81.50, Subway patrons were much more likely to see calorie information than those at other chains. In addition, Subway customers who saw the calorie information purchased 52 fewer calories than those who did not. The full report, which will be published in print format in the *American Journal of Public Health* in August 2008, is attached as Exhibit 5.

Anecdotally, press reports cite *"employees at Dunkin Donuts and Starbucks in Park Slope saying they have noticed changes in their customers eating habits."*¹³

9. Conclusion

Experience since Health Code § 81.50 took effect confirms that calorie labeling is feasible. Food service establishments have added calorie information to their menus and menu boards in a

¹¹ Marlene Naanes and Rebecca Wolfson, "Hard to Stomach: Fast Food Calorie Listings Are Changing What New Yorkers Eat," *AM New York*, July 7, 2008.

¹² Melinda Beck, "On the Table: the Calories Lurking in Restaurant Food," *The Wall Street Journal*, July 29, 2008. Accessed online July 29, 2008 from http://online.wsj.com/public/article_print/SB121728720696791385.html

¹³ Marlene Naanes and Rebecca Wolfson, "Hard to Stomach: Fast Food Calorie Listings Are Changing What New Yorkers Eat," *AM New York*, July 7, 2008.

1 wide variety of attractive and clear graphic formats, maintaining the diverse styles already used by
2 chains to communicate their menu offerings. The public response and preliminary information we
3 have obtained on restaurant menu items suggest that this measure will contribute to reducing caloric
4 intake at chain establishments because of changes in consumer selections, modified menu offerings,
5 or both. Calorie posting is therefore likely to help to address the nation's severe obesity epidemic, the
6 largest cause of preventable death after smoking.¹⁴ Ongoing monitoring and evaluation in New York,
7 as well as other cities that adopt similar rules, will help to further assess its impact.

8 I declare under penalty of perjury, pursuant to U.S.C. § 1746, that the foregoing is true and
9 correct.

10 Executed on August 19, 2008, at New York, New York

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12 
13 MARY T. BASSETT MD, MPH

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26 ¹⁴ Ali H. Mokdad, PhD; James S. Marks, MD, MPH; Donna F. Stroup, PhD, MSc; Julie L.
27 Gerberding, MD, MPH. Actual Causes of Death in the United States, 2000. JAMA. 2004;291:1238-
28 1245.

EXHIBIT 1

CURRICULUM VITAE

Date of preparation July 2008

Personal Data

Name: Mary Travis Bassett
Birthdate: November 12, 1952
Birthplace: Columbus, Ohio
Citizenship: United States Citizen
Address: 96 Park Terrace West
New York, NY 10034
Tel: 212-788-5323 (work)
212-569-0213 (home)
Fax: 212-788-5337 (work)
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mbassett@health.nyc.gov (work)

Academic Training

1974 A.B., cum laude, History and Science, Radcliffe College
Boston, Massachusetts

1979 M.D., Columbia College of Physicians and Surgeons
New York, New York

1983 Diplomate, American Board of Internal Medicine
Candidate 089171

1985 M.P.H., University of Washington
Seattle, Washington

Traineeships

1979-1982 Residency Training, Internal Medicine
Harlem Hospital Center
New York, New York

1982-1983 Chief Resident, Department of Medicine
Harlem Hospital Center
New York, New York

1983-1985 Robert Wood Johnson Clinical Scholar
University of Washington
Seattle, Washington

Professional Organizations and Societies

Member	American Public Health Association
Member	International Epidemiology Association
Member	American Epidemiology Association
International Editor	American Journal of Public Health (2000- 2002)
Associate Editor	American Journal of Public Health (2002- present)

Academic Appointments/Employment

2002- present	Deputy Commissioner, Health Promotion & Disease Prevention NYC Department of Health and Mental Hygiene New York, New York
1985-2005	Department of Community Medicine University of Zimbabwe Harare, Zimbabwe
	1985-1991 Lecturer
	1992-2000 Senior Lecturer (on leave 1987-88, 1995-97)
	2000-2005 Associate Professor
1995- present	Associate Professor, Clinical Public Health and Clinical Medicine Columbia University, College of Physicians and Surgeons (on leave)
2001-2002	Associate Director, Health Equity Rockefeller Foundation Southern Africa Office
1997-2001	Research Associate, Department of Medicine Stanford University Medical Center
1995-1997	Director, Harlem Center for Health Promotion and Disease Prevention Columbia School of Public Health New York, New York
1987-1988	Attending Physician, Department of Medicine Harlem Hospital Center New York, New York
1983-1985	Robert Wood Johnson Clinical Scholar University of Washington Seattle, Washington

Honors

- | | |
|------|--|
| 1974 | Ames Award for "Courage and Leadership"
Harvard-Radcliffe College |
| 1979 | Franklin McLean Award for "Best Graduating Black Medical Student" |

Consultancy Work

- | | |
|---------------------|---|
| January 1992 | Review of water and sanitation related diseases in Zimbabwe. Commissioned by the World Bank, funded by UNICEF. |
| August 1992 | Evaluation of Village Community Worker Program in Zimbabwe, Commissioned by UNICEF. |
| June-July 1997 | Team member, Assessment of Malawi AIDS Control Program
World Bank. |
| Nov. '97- March '98 | Assessment of the impact of the Family Health Project in collaboration with the Ministry of Health, World Bank. |
| May-December 2000 | Team member, AIDS Exploration, Rockefeller Foundation. |

Fellowship and Grant Support

- | | |
|--------------------------------|---|
| January 1992 –94 | Preparation for evaluation of AIDS vaccine (PAVE) funded by National Institutes of Health. Co-Investigator. |
| March 1992 -
February 1994 | "Impact of structural adjustment on health in an urban and a rural area of Zimbabwe", funded by Scandinavian Institute for African Studies. Co-Principal Investigator. |
| April 1992 -
December 1994 | "Women and AIDS in Zimbabwe: An Ethnographic Study"
International Center for Research on Women, Washington, D C |
| January 1993 -
January 1994 | "User acceptability of the female condom in Zimbabwe"
awarded by World Health Organization, Special Programme of Research Development and Research Training in Human Reproduction. Principal Investigator. |
| April 1994 -
March 1996 | "Adolescents' AIDS Prevention". Ford Foundation. Principal Investigator. |
| August 1994 -
December 1995 | "User acceptability of over-the-counter vaginal preparations"
Population Council. Multicentre study; Zimbabwe Principal |

Investigator.

November 1997- 2000	University of Zimbabwe Principal Investigator and programme director Zimbabwe AIDS Prevention Project (ZAPP), a HIVNET (NIH) site.
August 1999- September 2001	Cost sharing for peer education in workplace-based AIDS prevention. Supported by the Royal Netherlands Embassy, Harare. Principal Investigator.
August 1999- September 2001	Factory based AIDS Prevention (FWAPP). Supported by AusAID in collaboration with Australian Overseas Volunteers.
December 1999- January 2002	Use of Lay Volunteers in HIV Counselling and Testing among among Antenatal Women in Chitungwiza. Supported by Swedish International Development Agency (SIDA) and National Institute of Health, USA. Principal Investigator.
April 1999- March 2003	Targeted Epidemiological Treatment vs. General Population Approaches to STD/HIV prevention. Supported by USAID under the The Horizons programme. Co-Principal Investigator.

Publications

Original, peer-reviewed articles

Bassett MT, Coons TA, Wallis W, Goldberg EH, Williams RC. Suppression of stimulation in mixed leukocyte culture by newborn splenic lymphocytes. *Journal of Immunology* 1977; 119:1855-1857.

Bassett MT, Krieger N. Social class and Black-White differences in breast cancer survival. *American Journal of Public Health* 1986; 76:1400-1403.

Krieger N, Bassett MT. The health of Black folk: Disease, class and ideology in science. *Monthly Review* 1986; 38(3):74-85.

Emmanuel JC, Bassett MT, Smith HJ. Risk factors for Hepatitis B infection among medical and paramedical workers in a general hospital in Zimbabwe. *Journal of Clinical Pathology* 1988; 41:334-336.

Emmanuel JC, Bassett MT, Smith HJ, Jacobs JA. Pooling of sera for human immunodeficiency virus (HIV) testing: An economical method for use in developing countries. *Journal of Clinical Pathology* 1988; 41:582-585.

Latif A, Katzenstein D, Bassett MT, Houston S, Emmanuel JC. Genital ulcer and transmission of HIV-1 among couples in Zimbabwe. *AIDS* 1989; 3:519-523.

Katzenstein D, Latif A, Grace S, Bassett MT. Clinical and laboratory characteristics of HIV-1

infection in Zimbabwe. *Journal of Acquired Immune Deficiency Syndromes* 1990; 3:701-707.
 Thomas JEP, Bassett MT, Sigola L, Taylor P. Relationship between bladder cancer incidence, S. Haematobium infection and geographic region in Zimbabwe. *Transactions of the Royal Society of Tropical Medicine and Hygiene* 1990; 84:551-553.

Bassett MT, Ndoro EZM, Chadzamira E, Mbengeranwa OL. Hypertension control in Harare municipal clinics. *Central African Journal of Medicine* 1990; 36:176-180.

Bassett MT, Taylor P, Bvirakare J, Chiteka F, Govere E. Clinical diagnosis of malaria: Can we improve? *Journal of Tropical Medicine and Hygiene* 1990; 94:64-69.

Bassett MT, Mhloyi M. Women and AIDS in Zimbabwe: The making of an epidemic. *International Journal of Health Services* 1991; 21:143-156.

Bassett MT, Latif A, Katzenstein D, Emmanuel JC. Sexual behavior and risk factors for HIV infection in a group of male factory workers in Harare, Zimbabwe. *Journal of Acquired Immune Deficiency Syndromes* 1992; 5:556-569.

Bassett MT, Levy LM, Chetsanga C, Chokunonga E. The Zimbabwe National Cancer Registry: Summary Data 1986-1989. *Central African Journal of Medicine* 1992; 38:91-94.

Fawcus S, Mwase R, Bassett MT. Chest circumference as an indicator of low birth weight. *Journal of Tropical Pediatrics* 1993; 39:48-49.

Taylor C, Sanders D, Bassett MT, Goings S. Surveillance for equity in maternal care in Zimbabwe. *World Health Statistical Quarterly* 1993; 46:242-246.

Mbizvo MT, Danso AP, Tswana S, Bassett MT, Marowa E, Mbengeranwa L. Reduced semen quality and risk behavior amongst men consulting a referral STD clinic. *Central African Journal of Medicine* 1994; 40:170-175.

Houston S, Ray S, Mahari M, Neil P, Legg W, Latif AS, Emmanuel J, Bassett MT, Pozniak A, Tswana S, Flowerdew G. The association of tuberculosis and HIV infection in Harare, Zimbabwe. *Tubercle and Lung Disease* 1994; 75:220-226.

Mbizvo MT, Ray S, Bassett MT, McFarland W, Machezano R, Katzenstein D. Condom use and the risk of HIV infection: Who is being protected? *Central African Journal of Medicine* 1994; 40:294-299.

Ray S, Bassett MT, Maposhere C, Manangazira P, Nicolette JD, Machezano R, Moyo J. Acceptability of the female condom in Zimbabwe: Positive but male centered response. *Reproductive Health Matters* No. 5, May 1995; 68-78.

Bassett MT, Levy L, Chokunonga E, Mauchaza B, Ferlay J, Parkin DM. Cancer in the European population of Harare, Zimbabwe, 1990-92. *International Journal of Cancer* 1995; 63:24-28.

Bassett MT, Chokunonga E, Mauchaza B, Levy L, Ferlay J, Parkin DM. Cancer in the African population of Harare, Zimbabwe, 1990-92. *International Journal of Cancer* 1995; 63:29-36.

Mbizvo MT, Bassett MT. Reproductive Health and AIDS prevention in sub-Saharan Africa: the case for increased male participation. *Health Policy and Planning* 1996; 11:84-92.

Mbizvo MT, Machekano R, McFarland W, Bassett MT, Ray S, Latif A, Katzenstein D. HIV seroincidence and correlates of seroconversion in a cohort of male factory workers in Harare, Zimbabwe. *AIDS* 1996; 10:895-901.

Bassett MT, McFarland W, Ray S, et al. Risk factors for HIV infection at enrolment in a male factory cohort in Harare, Zimbabwe. *Journal of Acquired Immune Deficiency Syndrome Disorders and Human Retrovirology* 1996; 13:287-293.

Bassett MT, Bijlmakers L, Sanders D. Professionalism, patient satisfaction and quality of health care: experience during Zimbabwe's Structural Adjustment Programme. *Social Science and Medicine* 1997; 45:1845-1852.

Mbizvo MT, Latif AS, Machekano R, MacFarland W, Bassett MT, Ray S, Katzenstein D. HIV seroconversion among factory workers in Harare. Who is getting newly infected? *Central African Journal of Medicine* 1997; 43:135-139.

Northridge ME, Morabia A, Ganz ML, Bassett MT, Gemson D, Andrews H, McCord C. Contribution of smoking to excess mortality in Harlem. *American Journal of Epidemiology* 1998; 147:250-258.

Machekano R, McFarland W, Mbizvo MT, Bassett MT, Katzenstein DA, Latif AS. Impact of HIV counseling and testing on HIV seroconversion and reported STD among male factory workers in Harare, Zimbabwe. *Central African Journal of Medicine* 1998; 44:98-102.

Hanmer L, Bijlmakers L, Bassett MT, Sanders DM, Chapman G. Human capital, targeting and social safety nets. An analysis of household data from Zimbabwe. *Oxford Development Studies* 1998; 26:245-265.

Diez Roux AV, Morabia A, Northridge ME, Bassett MT, Shea S. Prevalence and social correlates of cardiovascular risk factors in Harlem. *American Journal of Public Health* 1999; 89:302-307.

Sherman J, Bassett MT. Adolescents and AIDS prevention. A school-based approach in Zimbabwe. *Applied Psychology* 1999; 48:109-124.

McFarland W, Gwanzura L, Bassett MT, Machekano R, Latif AS, Ley C, Parsonnet J, Burke RL, Katzenstein DA. Prevalence and incidence of herpes simplex virus type 2 infections among male Zimbabwean factory workers. *Journal of Infectious Diseases* 1999; 180:1459-65.

Gwanzura L, Latif A, Bassett M, Machekano R, Katzenstein DA, Mason PR. Syphilis serology and

HIV infection in Harare, Zimbabwe. *Sexually Transmitted Infections* 1999; 75:426-430.

Chokunonga E, Levy LM, Bassett MT, Borok MZ, Mauchaza BG, Chirenje ZM, Parkin DM. AIDS and Cancer in Africa: The evolving epidemic. *AIDS* 1999; 13(18): 2583-2588.

Fullilove RE, Fullilove MR, Northridge ME, Ganz ML, Bassett MT, McLean DE, Aidala AA, Gemson DH, McCord C. Risk factors for excess mortality in Harlem. Findings from the Harlem Household Survey. *American Journal of Preventive Medicine* 1999; 16(3 Suppl): 22-28.

Diez-Roux Av, Northridge ME, Morabia A, Bassett MT, Shea S. Prevalence and social correlates of cardiovascular disease risk factors in Harlem. *American Journal of Public Health* 1999; 89(3): 302-307

Chokunonga E, Bassett MT, Levy L M, Mauchaza B G, Thomas D B, Parkin D M. Cancer incidence in the African Population of Harare, Zimbabwe: Second results from the Cancer Registry 1993-1995. *International Journal of Cancer* 2000; 85:54-59.

Machekano R, McFarland W, Hudes ES, Bassett MT, Mbizvo MT, Latif AS, Katzenstein D. Correlates of HIV test results seeking and utilization of partner counseling services in a cohort of male factory workers in Zimbabwe. *AIDS and Behaviour* 2000; 4:63-70.

Machekano R, Bassett MT, Zhou PS, Mbizvo M T, Latif A S, Katzenstein D. Report of sexually transmitted diseases by HIV infected men during follow-up: Time to target the HIV infected? *Sexually Transmitted Infections* 2000; 76:188-192.

Bassett MT. Psychosocial and community perspectives on alternatives to breastfeeding. *Annals of the New York Academy of Sciences* 2000; 918:128-135.

Bassett MT. The pursuit of equity in health: Reflections on race and public health data in Southern Africa. *American Journal of Public Health* 2000; 90:1690-1693.

Bassett, MT. Keeping the M in MTCT: Women, mothers and HIV prevention. *American Journal of Public Health* 2001; 91:701-703.

Ashford AR, Albert SM, Hoke G., Cushman LF, Miller DS, Bassett M. Prostate carcinoma knowledge, attitudes and screening behavior among African-American men in Central Harlem, New York City. *Cancer* 2001; 91:164-172.

Zabos GP, Ro MJ, Trinh C, Vaughan R, Howard JM, Lamster I, Bassett MT, Cohall AT. Lack of oral health care for adults in Harlem: a hidden crisis. *American Journal of Public Health* 2002; 92:49-52.

Bassett MT. Ensuring a public health impact on programs to reduce HIV transmission from mothers to infants: the place of voluntary counseling and testing. *American Journal of Public Health* 2002; 92:347-352.

Machekano R, Bassett MT, McFarland W, Katzenstein D. Clinical signs and symptoms in the assessment of immunodeficiency in men with subtype C HIV Infection in Harare, Zimbabwe. *HIV Clinical Trials* 2002; 3(2):148-154.

Cowan FM, Langhaug LF, Mashungupa GP, Nyamura T, Hargrove J, Jaffar S, Peeling RW, Brown DW, Power R, Johnson AM, Stephenson JM, Bassett MT, Hayes RJ; Regai Dzive Shiri Project. School based HIV prevention in Zimbabwe: feasibility and acceptability of evaluation of trials using biological outcomes. *AIDS* 2002; 16:1673-1678.

Fritz, KE, Woelk, GB, Bassett MT, McFarland, WC, Routh, JA, Tobaiwa, O, Stall RD. The association between alcohol use, sexual risk behavior, and HIV infection among men attending beerhalls in Harare, Zimbabwe. *AIDS & Behavior* 2002; 6:221-228.

Shetty AK, Coovadia HM, Mirochnick MM, Maldonado Y, Mofenson LM, Eshleman SH, Fleming T, Emel L, George K, Katzenstein DA, Wells J, Maponga CC, Mwatha A, Jones SA, Abdool Karim SS, Bassett MT, HIVNET 023 Study Team. Safety and trough concentrations of nevirapine prophylaxis given daily, twice weekly, or weekly in breast-feeding infants from birth to 6 months. *Journal of Acquired Immune Deficiency Syndrome* 2003; 34: 482-490.

Stover GN, Bassett MT. Practice is the purpose of public health. *American Journal of Public Health* 2003; 93(11):799-801.

Krieger N, Northridge M, Gruskin S, Quinn M, Kriebel D, Davey Smith G, Bassett M, Rehkopf DH, Miller C; HIA "Promise and pitfalls" conference group. Assessing health impact assessment: multidisciplinary and international perspectives. *Journal of Epidemiology Community Health* 2003; 57:659-62.

Bassett, MT, Perl S. Obesity: Public Health Challenge of Our Time. *American Journal of Public Health* 2004; 94:1477

Gondos A, Chokunonga E, Brenner H, Parkin DM, Sankila R, Borok MZ, Chirenje ZM, Nyakabau, Bassett MT. Cancer survival in southern African urban population, *International Journal of Cancer* 2004; 112:860-864.

Gottlieb D, Shetty AK, Mapfungautsi RM, Bassett MT, Maldonado Y, Katzenstein DA. Infant feeding practices of HIV-infected and uninfected women in Zimbabwe. *AIDS Patient Care & Sids*. 2004; 18(1):45-53.

Power R, Langhaug LF, Nyamurera T, Wilson D, Bassett MT, Cowan FM. Developing complex interventions for rigorous evaluation--a case study from rural Zimbabwe. *Health Education Research* 2004; 19(5):570-5.

Miller N, Frieden TR, Liu SY, Matte TD, Mostashari F, Deitcher DR, Cummings MK, Chang C, Bauer U, Bassett MT. Effectiveness of a large-scale distribution programme of free nicotine patches: a prospective evaluation. *Lancet* 2005; 365:1849-1854.

Lee EJ, Kantor R, Zijenah L, Sheldon W, Emel L, Mateta P, Johnston E, Wells J, Shetty AK, Coovadia H, Maldonado Y, Jones SA, Mofenson LM, Contag CH, Bassett M, Katzenstein DA, HIVNET 023 Study Team. Breast-milk shedding of drug-resistant HIV-1 subtype C in women exposed to single-dose nevirapine. *Journal of Infectious Diseases* 2005; 192(7):1260-4.

Cowan FM, Hargrove JW, Langhaug LF, Jaffar S, Mhuriyengwe L, Swarthout TD, Peeling R, Latif A, Bassett MT, Brown DW, Mabey D, Hayes RJ, Wilson D. The appropriateness of core group interventions using presumptive periodic treatment among rural Zimbabwean women who exchange sex for gifts or money. *Journal of Acquired Immune Deficiency Syndromes* 2005. 38:202-7.

Bassett MT. Diabetes is epidemic. *American Journal of Public Health*. 95:1496, 2005.

Shetty AK, Mhazo M, Moyo S, von Lieven A, Mateta P, Katzenstein DA, Maldonado Y, Hill D, Bassett MT. The feasibility of voluntary counselling and HIV testing for pregnant women using community volunteers in Zimbabwe. *International Journal of STD & AIDS* 2005; 16:755-9. .

Cowan FF, Pascoe SJ, Barlow KL, Langhaug LF, Jaffar S, Hargrove JW, Robinson NJ, Latif AS, Bassett MT, Wilson D, Brown DW, Hayes RJ. Association of genital shedding of herpes simplex virus type 2 and HIV-1 among sex workers in rural Zimbabwe. *AIDS* 2006; 20:261-7.

Corbett EL, Dauya E, Matambo R, Cheung YB, Makamure B, Bassett MT, Chandiwanana S, Munyati S, Mason PR, Butterworth AE, Godfrey-Faussett P, Hayes RJ. Uptake of workplace HIV counselling and testing: a cluster-randomised trial in Zimbabwe. *PLoS Medicine / Public Library of Science*. 3(7):e238, 2006 Jul.

Martin-Herz SP, Shetty AK, Bassett MT, Ley C, Mhazo M, Moyo S, Herz AM, Katzenstein D. Perceived risks and benefits of HIV testing, and predictors of acceptance of HIV counselling and testing among pregnant women in Zimbabwe. *International Journal of STD & AIDS* 2006;. 17:835-41. .

Bassett, MT. Health for All in the 21st Century. *American Journal of Public Health* 2006; 96: 2089.

Frieden TR, Bassett MT, Thorpe LE, Farley TA. Public Health in New York City, 2002-2007: confronting epidemics of the modern era. *International Journal of Epidemiology* 2008; 1-12.

Bassett MT, Dumanovsky T, Huang C, et al. Purchasing Behavior and Calorie Information at Fast-Food Chains in New York City, 2007. *American Journal of Public Health* 2008; 1457 – 1459.

Letters

Emmanuel JC, Bassett MT, Smith HJ. Prevalence of HTLV-1 in Zimbabwe: A pilot survey. *Journal of Clinical Pathology* 1989; 42:669-670.

Emmanuel JC, Bassett MT, Smith HJ, Peterson LE. Measurement of alanine aminotransferase (ALT) in Zimbabwe: A possible indicator of non-A non-B hepatitis. *Central African Journal of Medicine* 1989; 35:469.

Coggins C, Elias CJ, Atisook R, Bassett MT, Ettiegn-Traore V, Ghys PG, Jenkins-Woelk L, Thongkrajai E, VanDevanter NL. A study of women's preferences regarding the formulation of over-the-counter vaginal spermicides. *AIDS* 1998; 12:1389-1403.

Coggins C, Elias C, Atissak R, Bassett MT, Traore VT, Jenkins-Woelk L. Brief Communication: Safety of three formulations of nonoxynol-9 containing vaginal spermicides. *International Journal of Gynecology and Obstetrics* 2000; 68: 267-268.

Feldman G, McCord C, Bassett MT, Frieden TR. Screening for colorectal cancer. *Journal of the American Medical Association* 2003; 290:191.

Bassett, MT. Smoking among deprived populations: not just a matter of choice. *American Journal of Public Health* 2003; 93:1033.

Monographs, Book Chapters, Working Papers

Bassett MT, Mhloyi M. "Women and AIDS: The making of an epidemic." Reprinted in Krieger N, Margo G (Eds.) *AIDS and the Politics of Survival*. Baywood Publishing Company, Amityville, New York 1994. Also reprinted in Fee E, Krieger N (Eds.) *Women's Health, Politics and Power*. Baywood Publishing Company, Amityville, New York 1994.

Bijlmakers L, Bassett MT, Sanders D. Health and structural adjustment in a rural and urban area of Zimbabwe. In Gibbon P (ed.) *Structural Adjustment and the Working Poor in Zimbabwe*. *Scandinavian Institute of African Studies* 1995.

Hanmer L, Bijlmakers L, Bassett MT, Sanders D, Chapman G. "Social safety nets, who needs them? An analysis of household data from Zimbabwe. Working Paper Series No. 211. February 1996. Institute of Social Studies. P.O. Box 29776 2502LT, The Hague, Netherlands.

Bijlmakers L, Bassett MT, Sanders D. Socioeconomic stress, health and child nutritional status in Zimbabwe at the time of Economic Structural Adjustment. *Nordic Institute of African Studies*. Research report no. 105. Uppsala, 1998.

Bassett MT, Bijlmakers L, Sanders DM. "Experiencing Structural Adjustment in Rural and Urban Households in Zimbabwe" In Turshen M (ed.) *African Women's Health*, pp 167-192. Africa World Press Inc. Trenton , New Jersey, 2000.

Bassett MT, Frieden TR, Deitcher DR, Matte T. "Strategies that promote health in cities: A local health department's perspective". In Galea, S and Vlahov, D (Eds.) Handbook of Urban Health: Populations, Methods, and Practice. Springer, forthcoming 2005.

Perl SB, Ellis JA, Vichinsky LE, et al. Smoking Cessation Strategies in New York City: 2002 – 2006. In: Progress in Smoking and Health Research. New York: Nova Publishers; 2007: 89 – 115.

Other writing

Manual for training mid-level health workers in community health and epidemiology. Prepared on request for the Ministry for Health, Zimbabwe, 1987. Revised for second printing, 1992.

"Epidemic cholera- Burundi and Zimbabwe, 1992-1993." *MMWR* 1992 vol. 42, p.407.

"The Female Condom." SafAIDS Newsletter, April 1994.

"Ethics in HIV/AIDS Research." Medical Research Council of Zimbabwe. Report of a Workshop held in Kadoma, Zimbabwe. July, 1994.

"Zimbabwe: Social roots of AIDS" UNESCO Courier 1994 volume 48, pp 17-19.

"Impact of peer education on HIV infection in Zimbabwe." Sexual Health Exchange 1998/4. KIT/SafAIDS). Royal Tropical Institute, POB 9500, 1090HA Amsterdam, The Netherlands.

"What they do not know can hurt them: How school-based reproductive health programmes can help adolescents lead healthy reproductive lives." Document prepared for ARHEP/TARSC June 2000. 47 Van Praagh Ave, Milton Park, Harare, Zimbabwe.

Henning KJ, Bassett MT, Silver L, Sederer L, Lyman A. Take Care New York: A policy for a healthier New York City. *City Health Information* 2004;23 (3) 11-18.

Abstracts:

Matenga J, Bassett MT, Loewenson RH. Blood pressure level and social status on a commercial farm in Zimbabwe. International Epidemiology Association, Helsinki Finland. XI Scientific Meeting, 1987; Abstract 166: 91.

Katzenstein DA, Latif AS, Bassett MT, Emmanuel JC. Risk of heterosexual transmission of HIV in Zimbabwe. Third International Conference on AIDS. Washington, DC, 1987.

Latif AS, Marowa E, Grace S, DeVilliers D, Mashu A, Katzenstein DA, Bassett MT, Emmanuel JC. Persistent generalised lymphadenopathy due to HIV infection in Zimbabwe. IVth International Conference on AIDS. Stockholm, Sweden, 1988.

Bassett MT, Emmanuel JC, Katzenstein DA, Latif A. HIV infection in urban men in Zimbabwe. Vth

Machekano R, McFarland W, Bassett M, Mandel J Views and attitudes towards HIV voluntary counselling and testing among urban men: Harare, Zimbabwe Abstract No. TuPeD3768. XIIIth International AIDS Conference July 2000 Durban South Africa.

Woelk G, Todd C, Bassett M, Chingono A. Alcohol and risky sexual behaviour in Zimbabwe Abstract No. WePeD4661. XIIIth International AIDS Conference July 2000 Durban South Africa.

Gwanzura L, Machekano R, Bassett M, Latif A, Mason P, Katzenstein D. HIV1/HSV-2 co-infection and sero-concordance among heterosexual couples in Harare, Zimbabwe Abstract No. ThOrC726. XIIIth International AIDS Conference July 2000 Durban South Africa.

Martin-Herz S P, Katzenstein D, Shetty A K, Mhazo M, Ley C, Machekano R, Moyo S, Chitibura L, Bassett M T. Predictors of acceptance of HIV testing and counselling by pregnant women in Zimbabwe Abstract No. ThPeC5313. XIIIth International AIDS Conference July 2000 Durban South Africa.

Cowan F, Langhaug L Regai dzive shiri – a feasibility study for a community randomised trial (CRT) of an adolescent reproductive health intervention (ARHI) in rural Zimbabwe Abstract No. ThPeC5452. XIIIth International AIDS Conference July 2000 Durban South Africa.

Martin-Herz, Bassett M T, Shetty A K, Chitibura L, Ley C, Moyo S, von Lieven A, Mhazo M, Katzenstein D Perceived risks and benefits of HIV testing among pregnant women in Zimbabwe Abstract No. ThPeD5790. XIIIth International AIDS Conference July 2000 Durban South Africa.

Bassett MT, Madimutsa A. Mamvura S. Acceptability of the female condom among Harare clinic attenders: A pilot study. VIth AIDS in Africa conference, Dakar, Senegal, December 16-19, 1991.

Bassett MT, Sherman J, Chanetsa Z, Ncube B, Mabaleka N, Nzara J, Woelk G. Talking with teenagers about sex: Experience in Harare area schools. VIIth International Conference on AIDS in Africa, Marrakech, Morocco. December 1993.

Bassett MT, Ray CS, Nicolette J, Manangazira P. User acceptability of the female condom among CSWs in Zimbabwe. VIIIth Conference on AIDS in Africa. Marrakech, Morocco. December 1993.

Mbizvo MT, Ray S, Bassett M, McFarland W, Machekano R, Mvere D, Mashingaidze R, Katzenstein DA. Condom use among urban male factory workers in Harare, Zimbabwe. VIIth International Conference on AIDS in Africa. Marrakech, Morocco, December 1993.

Bassett MT, Mbizvo M, Ray CS. Separation from wife as a risk factor for HIV infection. VIIIth Conference on AIDS in Africa. Marrakech, Morocco. December 1993.

Mvere D, McFarland W, Ray S, Mbizvo MT, Bassett M, Nhau B, Katzenstein D. Blood donor screening. VIIIth Conference on AIDS in Africa, Marrakech, Morocco. December 1993.

Sherman J, Bassett MT. Experience in a school based AIDS prevention programme in Harare, Zimbabwe. VIIIth Conference on AIDS in Africa, Marrakech, Morocco. December 1993.

Mashingaidze A, Bassett M, Machekano R, Katzenstein D. The relationship of Hepatitis B Virus and HIV seropositivity in a group of male factory in Harare Zimbabwe. Abs. No. 13301. 12th World AIDS Congress. June, 1998. Geneva, Switzerland.

Machekano R, Zhou P, Nyamurera T, Bassett M, Katzenstein D. Serial CD4 counts following HIV seroconversion in a male factory cohort in Harare, Zimbabwe. Abs No. 13316. 12th World AIDS Congress. June 1998, Geneva Switzerland.

Woelk G, Kerkhoven R, Todd C, Bassett M, Chingono A. Sex, rights and roles. Abs. No. 14175. 12th World AIDS Congress. June, 1998. Geneva Switzerland.

Bassett M, Gwanzura L, Mason PR, Machekano RM, Latif AS, Mbizvo MT, Katzenstein DA. Low prevalence of active syphilis in a population with high prevalence and incidence of HIV. Abs. No. 22197. June, 1998. Geneva Switzerland.

Katzenstein D, McFarland W, Mbizvo M, Latif A, Machekano R, Parsonnet J, Bassett M. Peer education among factory workers in Zimbabwe; providing a sustainable HIV prevention intervention. Abs. No 540/33514. 12th World AIDS Congress. June, 1998. Geneva Switzerland.

McFarland W, Bassett MT, Gwanzura L, Latif A, Machekano R, Burke L, Katzenstein DA. Acquisition of herpes simplex virus type 2 (HSV-2) infection in a cohort of Zimbabwean men with high prevalence and incidence of HIV. Abs No. 23363. 12th World AIDS Congress. June 1998. Geneva Switzerland.

Machekano R, Bassett MT, Mashingaidze A, Katzenstein D. Risk mortality due to HIV infection in a male factory-based cohort in Harare, Zimbabwe. Abs No. 13PT53-7. XIth International Conference on AIDS and STDs in Africa, September 1999 Lusaka Zambia.

Latif A, Machekano R, Bassett MT, Jeché M, Katzenstein D. Clinical signs and symptoms of sub-type C HIV infection in Harare, Zimbabwe. Abs No. 13PT53-8. XIth International Conference on AIDS and STDs in Africa, September 1999 Lusaka Zambia.

Bassett MT, Latif A, Machekano R, Mbizvo M, Katzenstein D. Incidence of sexually transmitted infections in a high prevalence male cohort in Harare, Zimbabwe. Abs No. 15DT3-1. XIth International Conference on AIDS and STDs in Africa, September 1999 Lusaka Zambia.

Jeché M, Dibi A, Bassett MT, Katzenstein D. Health worker attitudes towards HIV testing in Chitungwiza, Zimbabwe. Abs No. 15ET4-4. XIth International Conference on AIDS and STDs in Africa, September 1999 Lusaka Zambia.

McFarland W, Machekano R, Hudes E, Bassett MT, Mbizvo M, Katzenstein D. Correlates of HIV test results seeking and partner counseling among male factory workers in Zimbabwe. Abs No. 15PT38-29. XIth International Conference on AIDS and STDs in Africa, September 1999 Lusaka

Zambia.

Moyo S, Mhazo M, Mateta P, von Lieven A, Shetty AK, Hill DW, Bassett M T. Acceptability of short course AZT prevention regimen by HIV infected pregnant women: Should VCT in the antenatal setting be modified? Abstract No. TuPpB1158. XIIIth International AIDS Conference July 2000 Durban South Africa.

Matshaka M, Jeché M, Mzezewa V, Bassett M T. Sustainable private sector AIDS prevention: cost sharing for peer education in the workplace in Harare, Zimbabwe Abstract No. ThPeC5425. XIIIth International AIDS Conference July 2000 Durban South Africa.

Jeché M, Guyer A, Dibi A, von Lieven A, Maponga C, Chipato T, Bassett MT. Health worker attitudes toward HIV testing in primary care clinics in Chitungwiza, Zimbabwe Abstract No. WeOrD629. XIIIth International AIDS Conference July 2000 Durban South Africa.

Mhazo M, Moyo S, von Lieven A, Maponga C, Bassett M T. HIV counselling and testing amongst antenatal women using lay community volunteers: Experience from urban Zimbabwe. Abstract No. TuOrC309. XIIIth International AIDS Conference July 2000 Durban South Africa.

Makarawo G, Mzezewa V, Kelly C, Shetty AK, Latif AS, Bassett MT. When people don't use what they know: Case studies in the gap between knowledge and behaviour among men in a workplace based AIDS prevention programme in Zimbabwe. Abstract No. ThPpD1467. XIIIth International AIDS Conference July 2000 Durban South Africa.

Noko K, Mzezewa V, Kelly C, Shetty AK, Latif AS, Bassett MT. Sexually transmitted disease treatment clinics as priority settings for HIV counselling and testing: Experience among Zimbabwean male factory workers. Abstract WePeC4354. XIIIth International AIDS Conference July 2000 Durban South Africa.

Mzezewa V, Kelly C, Matshaka M, Mbizvo M, Latif AS, Makarawo G, Katzenstein D, Ray S, Bassett MT. Private sector response to HIV prevention programmes – 8 year experience in peer education at the workplace. Abstract No. ThPpD1514. XIIIth International AIDS Conference July 2000 Durban South Africa.

Gottlieb D, Shetty A K, Bassett M T, Mapfungautsi R M, Katzenstein D. Infant feeding: Knowledge, attitudes and practices among women in Zimbabwe. Abstract No. MoPeD2785 XIIIth International AIDS Conference July 2000 Durban South Africa.

Machekano R, McFarland W, Bassett M T, Katzenstein D. Signs and symptoms, predictors of mortality for subtype C HIV infection among men in Harare Abstract No. TuPeC3310. XIIIth International AIDS Conference July 2000 Durban South Africa.

Machekano R, McFarland W, Bassett M, Mandel J. Views and attitudes towards HIV voluntary counselling and testing among urban men: Harare, Zimbabwe Abstract No. TuPeD3768. XIIIth International AIDS Conference July 2000 Durban South Africa.

Woelk G, Todd C, Bassett M, Chingono A. Alcohol and risky sexual behaviour in Zimbabwe Abstract No. WePeD4661. XIIIth International AIDS Conference July 2000 Durban South Africa.
Gwanzura L, Machekano R, Bassett M, Latif A, Mason P, Katzenstein D. HIV1/ HSV-2 co-infection and sero-concordance among heterosexual couples in Harare, Zimbabwe Abstract No. ThOrC726. XIIIth International AIDS Conference July 2000 Durban South Africa.

Martin-Herz S P, Katzenstein D, Shetty A K, Mhazo M, Ley C, Machekano R, Moyo S, Chitibura L, Bassett M T. Predictors of acceptance of HIV testing and counselling by pregnant women in Zimbabwe Abstract No. ThPeC5313. XIIIth International AIDS Conference July 2000 Durban South Africa.

Cowan F, Langhaug L. Regai dzive shiri – a feasibility study for a community randomised trial (CRT) of an adolescent reproductive health intervention (ARHI) in rural Zimbabwe Abstract No. ThPeC5452. XIIIth International AIDS Conference July 2000 Durban South Africa.

Martin-Herz, Bassett M T, Shetty A K, Chitibura L, Ley C, Moyo S, von Lieven A, Mhazo M, Katzenstein D. Perceived risks and benefits of HIV testing among pregnant women in Zimbabwe Abstract No. ThPeD5790. XIIIth International AIDS Conference July 2000 Durban South Africa.

Invited Lectures

Evaluating Asbestos-related research in Africa.” Occupational Safety and Health, Ministry of Labour and Asbestos Institute, Montreal, Canada. August 1987.

”AIDS in Africa: Epidemiology and Social Dimensions.” Massachusetts Institute of Technology. (Part of lecture series on ”AIDS: Biological and Social Dimensions.”) October 1989.

”Women and AIDS in Zimbabwe.” Institute for History of Science, Massachusetts Institute of Technology. April 1990.

”Social and Economic Determinants of Vulnerability to HIV Infection.” VIIIth International Conference on AIDS, Berlin, Germany. June 7-11, 1993. Plenary presentation.

”Enabling strategies in HIV prevention: Experience from Zimbabwe.” Global Program on AIDS, World Health Organization, Geneva, Switzerland. September 1993.

”Strategies for Preserving Breast Feeding.” Social Science Track D Plenary, 12th International Conference on AIDS, Geneva, Switzerland. June 30, 1998.

”Public Health Crisis in Africa: AIDS and economic reform.” Plenary presentation. Health and Society in African, Berkeley -Stanford Joint Center. April 24, 1999.

”User and Community Perspectives of Microbicide/Spermicides” Plenary presentation. Proceedings of the 10th World Congress on Human Reproduction, Salvador, Brazil May 4-8, 1999

Edited by Coutinho E M and Spinola P Department of Gynecology, Obstetrics and Human Reproduction. Faculty of Medicine, Federal University of Bahia Brazil.

“Psychosocial and Community Perspectives on Alternatives to Breastfeeding.” Plenary presentation. Global Strategies for Prevention of HIV transmission from Mother to Infant, Montreal, Canada September 3, 1999.

“Impact of Structural Adjustment on Urban and Rural Households in Zimbabwe.” Plenary presentation. Epidemiology Association of Southern Africa (ESSA) Annual meeting East London, South Africa. February 2000.

Debate: “Does Structural Adjustment fuel the AIDS epidemic?” XIIIth International Conference on HIV/AIDS Durban South Africa. July 2000.

“Voluntary Counseling and Testing. Optimizing the impact.” Plenary presentation. Third annual meeting, Global Strategies for Prevention of HIV transmission from Mother to Infant, Kampala Uganda. September 9, 2001.

“Implementing Multi-level Interventions: Challenges for Health Department”. 2nd. International Conference on Urban Health. New York Academy of Medicine. October 18, 2003.

“Public Health Programs in Obesity Prevention”. The International Pandemic of Obesity Annual Symposium. New York Academy of Medicine. June 1, 2004.

EXHIBIT 2

HOT & *fresh* TOASTEDCal
6" sub

560

Meatball Marinara

450

Italian B.M.T.

480

Spicy Italian

400

Prime Rib

380

Subway Melt

580

Chicken & Bacon Ranch

6" Sub

3.39

3.99

3.99

4.19

4.19

4.69

LOCAL FAVORITESCal
6" sub

410

Cold Cut Combo

530

Tuna

Veggie Patty

6" Sub

3.69

3.99

3.99

04.30.2008

Original Pretzel | 370 cal

Specialty Pretzels

Almond | 400 cal

Garlic | 350 cal

Sesame | 410 cal

Cinnamon Sugar | 450 cal

Jalapeño | 310 cal

Whole Wheat | 370 cal

Glazin' Raisin® | 510 cal

Sour Cream & Onion | 370 cal

Original Pretzel Stix | 370 cal

Cinnamon Sugar Pretzel Stix | 450 cal

Pretzel Dog | 290 cal

Dips

Cheese | 100 cal

Caramel | 135 cal

Hot Salsa Cheese | 100 cal

Marinara | 10 cal

Sweet Glaze | 40 cal

Sweet Mustard | 60 cal

Light Cream Cheese | 100 cal



T-Bone Steak & Eggs

T-Bone Steak & Eggs

A mouthwatering, USDA Select steak served with three eggs and three buttermilk pancakes 14.99 (1180 Cal.)

***Country Fried Steak & Eggs**

Tender beef, dipped in batter and fried to a golden brown then smothered in sausage gravy. Served with three eggs and three buttermilk pancakes 10.29 (1230 Cal.)

***Five Star Breakfast**

Two eggs, two French toast triangles, five silver dollar pancakes, two bacon strips and two pork sausage links 8.99 (1070 Cal.)

Egg substitute or egg whites are available upon request for an additional .99 (Save 40-50 Cal. per egg)

Classic Combos



Smokehouse Combo

NEW! *Smokehouse Combo

Two smoked sausage links served with two eggs, hash browns and two buttermilk pancakes 8.59 (1290 Cal.)

***Three Eggs & Pancakes**

3 eggs served with three fluffy buttermilk pancakes (700 Cal.) 6.59
Or with your choice of meat below.

Grilled Ham 7.29

(Add 120 Cal.)

Turkey Bacon Strips 8.19

(Add 200 Cal.)

Bacon Strips 7.29

(Add 270 Cal.)

Savory Beef Sausage 8.19

(Add 520 Cal.)

Pork Sausage Links 7.29

(Add 340 Cal.)

Turkey Sausage 8.19

(Add 200 Cal.)

***Two x Two x Two**

Two eggs with two buttermilk pancakes and two bacon strips or two pork sausage links 6.99 (650-690 Cal.)

***Pork Chops & Eggs**

Two grilled center-cut pork chops served with three eggs and three buttermilk pancakes 11.59 (1100 Cal.)

***Corned Beef Hash & Eggs**

Home-style corned beef hash, three eggs and three buttermilk pancakes 8.49 (950 Cal.)

NEW! *Sirloin Tips & Eggs

Grilled, tender, juicy, marinated USDA Select sirloin tips with grilled onions and mushrooms. Served with two eggs, hash browns and two buttermilk pancakes 12.99 (1230 Cal.)

***Quick Two-Egg Breakfast**

Two eggs, two bacon strips or two savory pork sausage links, plus hash browns and toast 7.59 (930-970 Cal.)

Substitute beef sausage, turkey sausage or turkey bacon for an additional 1.25 (50-260 Cal. each piece)

French Toast & Waffles

NEW! Strawberry Banana French Toast

Six French toast triangles topped with cool strawberry, fresh banana and whipped topping 7.59 (990 Cal.)

***Vive La French Toast!**

Three thick slices, served with one egg and two bacon strips or two pork sausage links 7.49 (1090-1130 Cal.)

Belgian Waffle

A light and crispy delight 6.29 (430 Cal.)
Crowned with cool strawberry or your choice of fruit compote and whipped topping 6.99 (530-670 Cal.)

French Toast

Six fluffy triangle-shaped slices, dusted with powdered sugar 6.59 (760 Cal.)

***Stuffed French Toast Combo**

Cinnamon raisin French toast stuffed with sweet cream cheese filling, topped with cool strawberry or your choice of fruit compote and whipped topping. Served with two eggs, hash browns, two bacon strips or two pork sausage links 8.99 (1150-1260 Cal.)

***Cinnamon Swirl French Toast Combo**

Two slices of cinnamon roll, grilled French toast-style. Served with two eggs, two bacon strips or two pork sausage links and hash browns 8.99 (1200-1240 Cal.)



Stuffed French Toast Combo

*Eggs, steaks and hamburgers can be cooked to order. Consuming raw or undercooked meats, poultry, seafood or eggs may increase your risk of foodborne illness.



Premium Salads

illed or new crispy

Northwest	grilled 330 Cal	\$ 5.49
	crispy 430 Cal	
on	grilled 300 Cal	\$ 5.49
	crispy 410 Cal	
on Ranch	grilled 250 Cal	\$ 5.49
	crispy 370 Cal	
esar	grilled 220 Cal	\$ 5.49
	crispy 330 Cal	
t & Walnut	210 Cal	\$ 2.89

amounts for salads do not include dressing



Salad Dressings

40 100 Cal

WITH		ORDER	
Chicken	naturally raised adobo marinated and grilled	Burrito	rice, beans, meat, salsa, cheese or sour cream <small>calorie range</small> 420-918
Steak	naturally raised adobo marinated and grilled	Fajita Burrito	all of the above, with peppers & onions instead of beans 390-880
Carnitas	seasoned, braised and shredded naturally raised pork	Burrito Bowl	served in a bowl, no tortilla 130-628
Barbacoa	braised and shredded naturally raised beef	Tacos	soft or crispy tacos with meat, salsa, cheese or sour cream, romaine lettuce 310-590
Vegetarian	includes black beans and guacamole	Salad	romaine lettuce, beans, meat, salsa, cheese, chipotle-honey vinaigrette 155-82
	7.15		
	7.61		
	7.61		
	7.61		
	7.15		



7 Angus Mushroom & Swiss

\$6.69 Meal

\$3.99 Sandwich

Angus Bacon & Cheese Sandwich 820 Cal. 1200-1440 Cal.

Angus Mushroom & Swiss Sandwich 820 Cal. 1200-1440 Cal.



NEW • 100% ANGUS • 1/3 POUND

Angus Deluxe Sandwich 760 Cal.



EXHIBIT 3

HARD TO STOMACH

Fast-food calorie listings are
changing what New Yorkers eat

PAGE 3

Use your state's phone to get up to date on the latest
A YES B NO C MAYBE
POSTING CHANGED?
NARE THE CALORIE
LISTINGS CHANGED?



Food for thought on menu

New calorie counts alter eating habits

By Marlene Mazzareo
and Rebecca Wolfson
mmazzareo@nypost.com

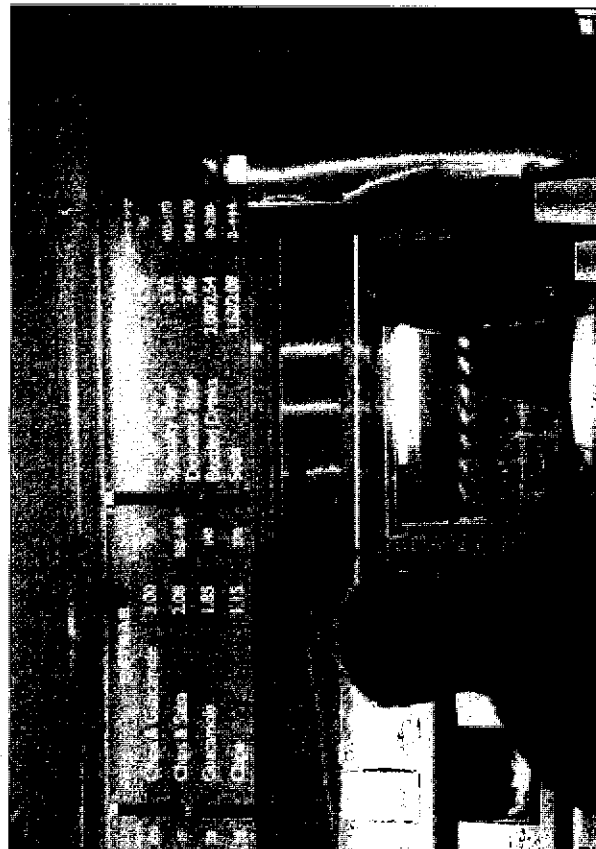
Two months after many New York chain restaurants began posting the number of calories in their food, customers are shying away from their calorie-laden favorites and opting for lighter fare.

"I go for the low-fat coffee cake instead of the regular cake, and it's a difference of like 150 calories," said Robb Martinez, 38, of Williamsburg, of his usual Starbucks order.

Another Starbucks regular was shocked into changing his daily order from a scone to a reduced-fat breakfast sandwich.

"The scone is over 400 calories... and even though the breakfast sandwich has bacon and cheese and eggs on it, it's less calories," said Mark Hamstra, 45, of the Upper East Side.

All New York City restaurants with 15 or more branches were forced to post calories on their menu boards beginning May 5. Restaurants that fail to comply will be fined



Restaurants with 15 or more city locations that don't post calorie counts by July 18 could be fined as much as \$2,000. (Oswald M. Ho)

It's a big topic of conversation [among customers].

— A Starbucks employee on menu calorie counts

between \$200 and \$2,000 during inspections after July 18.

Employees at Dunkin' Donuts and Starbucks locations in Park Slope said they have noticed a change in their customers' eating habits, leading to a drop in the sale of pastries. Workers spoke on condition of anonymity because they are not authorized to comment. Company officials

as we revise our food op

tions," the company wrote in an e-mailed statement. Also, it recently converted its core milk to two-percent and introduced sugar-free syrups in products such as Skinny Lattes.

Officials at McDonald's declined to comment, but a Burger King spokesman said the company is still fighting the regulations. However, officials at the city's Department of Health said last week that the rules are final and any hopes of an appeal are futile. A federal appeals court is still reviewing the matter.

ADD IT UP

A sampling of the calories:

Dunkin' Donuts

Wheat doughnut: 220
Boston Kreme doughnut: 270
Jelly doughnut: 270
Reduced-fat blueberry muffin: 400
Coffee cake: 590

Starbucks

Tall caramel Macchiato: 180
Tall Chai tea: 340
Tall green tea: 370
Black Forest Ham, egg, cheddar sandwich: 380
Marble loaf: 450

McDonald's

Big Mac: 540
Burger King Whopper without mayo: 520

Chipotle

Margarita: 95
Guacamole: 140
Tacos: 310-590
Burrito bowl: 130-628
Chips and salsa: 585-670

Subway

6-inch Veggie Delite: 265
6-inch turkey breast: 315
6-inch roasted chicken breast: 345

Dunkin' Donuts is among the shops falling into compliance citywide, however reluctantly. A spokesman for the company wrote in an e-mail that the company considered the rules unfair since they don't apply to all restaurants.

EXHIBIT 4



THE WALL STREET JOURNAL. O N L I N E

July 29, 2008

HEALTH JOURNAL
By MELINDA BECK



On the Table: the Calories Lurking in Restaurant Food

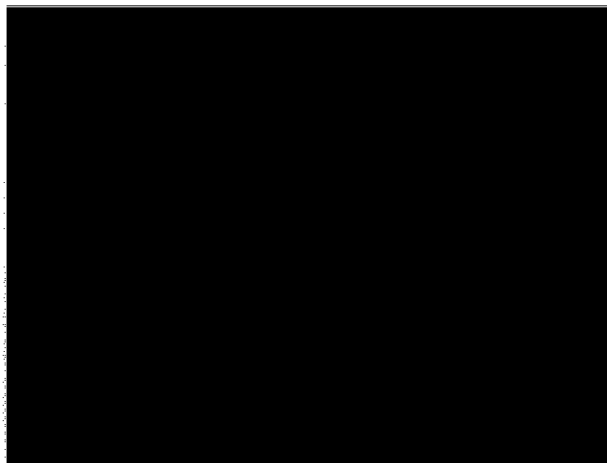
July 29, 2008; Page D1

It's no mystery why Americans are getting fatter. We're expending less energy to work, play, travel and acquire food. And we're taking more calories in.

And how!

New York City's recent law requiring chain restaurants to post calorie counts on menus has revealed some intriguing -- and appalling -- information. Some observations:

How Bad Is It?



A new law is forcing New York City restaurant franchises to post calorie counts on their menus. To gauge New Yorker reaction, WSJ's Mall Rivera hits the streets.


Studies have shown that even dietitians often underestimate how many calories dishes contain, and no wonder. Applebee's Fiesta Lime Chicken packs 1,290 calories. Pizzeria Uno's Individual Chicago Classic (serves one) has 2,310. Who could eat another bite after an appetizer like T.G.I. Friday's Jack Daniel's Sampler at 2,330? Bear in mind that to maintain their present weight, most men should consume from 2,000 to 2,500 calories a day; most women from 1,500 to 1,800, depending on activity level and size.

But It Sounds So Healthy ...

Salads come so embellished these days they may as well be dessert. The Pecan-Coated Chicken Salad at T.G.I. Friday's (garnished with mandarin oranges, dried cranberries, glazed pecans, celery and blue cheese) is 1,360 calories. California Pizza Kitchen's Grilled Vegetable Salad is 1,020, or 1,490 with sautéed salmon.

Sandwiches can be a caloric bargain in comparison. At Shea Stadium's Metropolitan Club, the

DOW JONES REPRINTS

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Grilled Chicken Caesar Salad is 807 calories; the Grilled Chicken Sandwich is 340. As veteran dieters know, dressing sends salads to the moon, calorically. Some menus helpfully point out options: Uno's honey mustard has 300 per serving; its fat-free vinaigrette has only 30. Friday's Balsamic Vinaigrette is 590. (Better yet, bring your own dressing "mist," available in a variety of flavors in grocery stores for 2 calories a spray.)

Everything's Relative

1

Surprisingly, one of the lowest-calorie options on some menus is the unadorned sirloin steak. The nine-ounce sirloin at Applebee's is 310 calories. The 10-ounce at Friday's is 290.

"I actually prefer a roast-beef sandwich to tuna salad -- and it turns out the tuna has almost twice the calories," says New York City Health Commissioner Thomas R. Frieden, who spearheaded the new law. On July 19, the city started fining restaurants that don't comply.

Have It Your Way

Embellishments like mayonnaise, parmesan coating, honey glaze, cheese, sour cream and guacamole add up fast -- which is why fajitas often weigh in at over 1,000 calories. Some restaurants list calories for individual ingredients so you can pick and choose. (Toppings for the Make Your Own Flatbread Pizza at Cosi range from three calories for spinach to 23 for Asiago cheese.) Others just list a frustratingly wide range. Chipotle's burritos run from 420 to 918 calories, and salads from 155 to 823, depending on what you put in them.

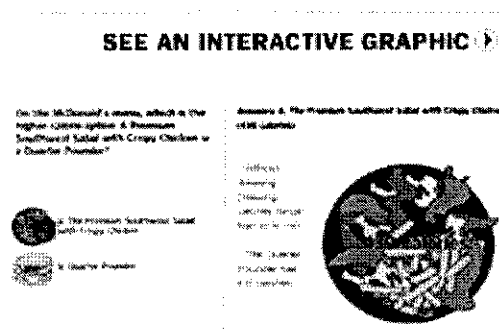
You Gonna Finish That?

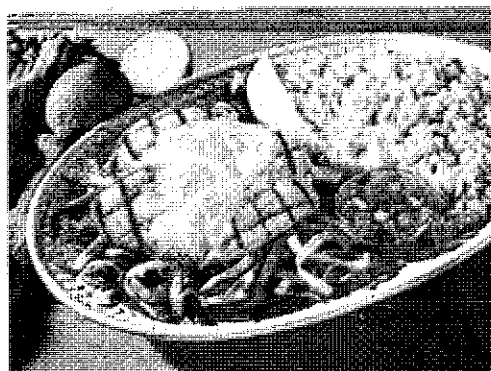
The massive calorie counts on some dishes accompany massive portions, which is part of the business model at some restaurants. "The incremental cost of upping the amount of food is very low compared with what consumers will pay," says Kelly Brownell, director of the Rudd Center for Food Policy and Obesity at Yale University. You can fight back by sharing that 1,500-calorie salad or taking half home. You can also make it your big meal of the day.

Lightening Up

Some restaurants have had their own sticker shock and started offering lighter options. Così had a nutritionist look for ways to save on every item. Switching to low-fat mayo brought the Così Club from nearly 800 calories to 447. Così's popular Signature Salad (with gorgonzola, grapes, pears, pistachios, dried cranberries and roasted sherry shallot vinaigrette) goes from 611 calories to 371 with reduced-fat dressing and half the cheese. "Having to post this information in New York really focused us on paying attention as well," says Chris Carroll, the chain's chief marketing officer.

Friday's, Applebee's, Uno's--even Taco Bell--have singled out menu offerings that are low fat, low carb, low cal or smaller sized. ("Smaller portions leave more room





Applebee's Fiestla Lime Chicken with Mexi-ranch dressing has 1,290 calories.

for appetizers, desserts and, of course, Margaritas!" notes Friday's Right Portion, Right Price menu.)

Starbucks has also cut, on average, 5% of the calories and 15% of the fat from its pastry items and 14% of the calories and 36% of the fat from its drinks in recent years and plans to introduce new, healthier menu items this fall. "We've been hearing from customers all over the country that they are looking for healthy options," says Stacey Krum, a spokeswoman. "They may still want an indulgent treat, but they want to make an informed decision."

Calorie-conscious diners outside New York can get help from Healthy Dining, a San Diego-based program that works with restaurants to develop healthy offerings, thanks in part to a grant from the Centers for Disease Control and Prevention. Its Web site, HealthyDiningFinder.com², lists 55,000 locations that have at least four meals less than 750 calories and 25 grams of fat, though some require a special request to hold a fattening ingredient.

"A lot of restaurants use a lot of butter or oil in the preparation. Cutting that by half usually doesn't change the taste or the consistency but it dramatically changes the calories and fat," says Healthy Dining Program's president Anita Jones-Mueller. "Some restaurants are really embracing this and creating exciting new items," she adds. "And others are kind of waiting to see if it goes away."

YOUR QUESTIONS ANSWERED



3

Columnist Melinda Beck answers readers' questions⁴ about when it's safe to sit in the sun, the role of vitamin D in health, how to nurse a crying baby without resorting to drugs, and more.

That doesn't seem likely. Even though the New York State Restaurant Association is appealing the city's law, other cities are following its lead. Starting next year, chain restaurants in Seattle will have to post not only calories, but also saturated fat, sodium and carbohydrates on menus. Similar laws are pending in San Francisco and have been proposed in other states and cities. In the meantime, determined dieters elsewhere can find calorie counts posted under nutrition information on some restaurant's Web sites. Sites like www.chowbaby.com⁵, www.thedailyplate.com⁶ and www.calorie-count.com⁷ have unauthorized calorie counts for restaurants, as do fan sites like Chipotlelovers.com⁸.

Will posting calories prominently really make Americans think twice and order more healthy items? "Anecdotally, you hear constantly about people who've changed their choices," say Commissioner Frieden. "You go into fast-food places and you hear a lot of buzz online."

Elisabetta Politi, director of nutrition at the Duke Diet & Fitness Center, isn't so sure. "Some of our clients know so much about nutrition they could teach the classes, but does that help them control their weight? Absolutely not," she says.

• Email HealthJournal@WSJ.com⁹

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(7) <http://www.calorie-count.com>
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EXHIBIT 5

RESEARCH AND PRACTICE

Purchasing Behavior and Calorie Information at Fast-Food Chains in New York City, 2007

Mary T. Bassett, MD, MPH, Tamara Dumanovsky, PhD, Christina Huang, MPH, Lynn D. Silver, MD, MPH, Candace Young, MS, Cathy Nonas, MS, Thomas D. Matte, MD, MPH, Sekai Chideya, MD, MPH, and Thomas R. Frieden, MD, MPH

We surveyed 7318 customers from 275 randomly selected restaurants of 11 fast food chains. Participants purchased a mean of 827 calories, with 34% purchasing 1000 calories or more. Unlike other chains, Subway posted calorie information at point of purchase and its patrons more often reported seeing calorie information than patrons of other chains (32% vs 4%; $P < .001$); Subway patrons who saw calorie information purchased 52 fewer calories than did other Subway patrons ($P < .01$). Fast-food chains should display calorie information prominently at point of purchase, where it can be seen and used to inform purchases. (*Am J Public Health*. 2008;98:1457–1459. doi: 10.2105/AJPH.2008.135020)

Rates of obesity and associated health complications are increasing rapidly in the United States. Fast food is typically calorie-dense, and frequent intake of fast food has been associated with increased calorie intake, weight gain, overweight, and obesity.^{1–5} Despite this, fast-food restaurants are not required to provide nutritional information, and, at the time of this study, only 1 large fast-food restaurant chain in New York City (Subway) lists calorie information at the point of purchase. Various state and local governments, including New York City's, are considering requiring restaurants to post calorie information prominently. We conducted a large cross-sectional survey to characterize patrons' fast-food purchases and their observation and use of calorie information.

METHODS

Sampling Strategy

A roster of all licensed food service establishments is maintained by the Department of Health and Mental Hygiene. Licensed food service establishments that provided calorie information publicly as of March 1, 2007, (either posted on-site or on the Internet) were eligible for inclusion in the study. Chains that sell ice cream were excluded because the study was intended to examine calorie patterns in daily food and beverage purchases. After excluding ice cream chains, 13 chains composed almost 90% of all eligible restaurants; the sample was further limited to these chains. We randomly sampled a total of 300 chain restaurants from approximately 1625 eligible locations across the 5 boroughs of New York City. This sample included 11 fast-food chains and 2 coffee chains. Fast-food chains included Au Bon Pain, Burger King, Domino's, Kentucky Fried Chicken (KFC), McDonald's, Papa John's, Pizza Hut, Popeye's, Subway, Taco Bell, and Wendy's. Coffee chains included Dunkin' Donuts and Starbucks. Because of different purchasing patterns at the coffee chains, our analyses are limited to the 11 fast-food chains, which accounted for 1064 (65%) of the eligible sites and 185 (62%) of the sampled sites.

Data Collection

Data collection took place from 12:00 PM to 2:00 PM on weekdays from March 27 through June 8, 2007. The target for data collection was 50 receipts per site; each location was visited once. Three-person data-collection teams stationed in front of the sampled locations maintained a count of all patrons entering the restaurant in order to calculate a participation rate. Data-collection teams approached patrons as they entered the restaurant and asked customers 18 years or older to provide their register receipts and answer a brief questionnaire when exiting; a \$2 New York City MTA Metrocard (a public transportation pass good for 1 subway or bus ride) was offered as an incentive for participation. In addition, data-collection teams asked all exiting patrons to participate. Adult patrons who agreed to participate were asked,

(1) "Was this purchase just for you?" (2) "Can you tell me what you ordered today?" (3) "What extras, modifications, or condiments did you add?" (e.g., dressing, mayonnaise, toppings; "diet" or "regular" beverage), (4) "Did you see calorie information in the restaurant?" and, if yes, (5) "Did the information affect your purchase?" The survey was conducted in English; personal identifiers were not collected.

Data Analysis

All items listed on receipts were entered into a database. Calories were ascribed to each item using each chain's Web site—published calorie information as of March 1, 2007, and adjusted based on patrons' reports of extras or customizations for which calorie information was also available. Patrons not identifying the specific type or quantity of extra were assigned that category's lowest caloric value (e.g., a patron did not specify the type of salad dressing selected, therefore 1 serving of "vinagrette" dressing was assigned because it had the fewest calories of all dressing options). We calculated the total calories per patron by aggregating calories across items purchased. Using total calories per patron, mean calories per purchase were calculated for each chain type and for the overall sample, as was the percentage of patrons purchasing 1000 calories or more or 1250 calories or more. One thousand calories was used as a benchmark because it represents 50% of the standard-reference 2000-calorie diet; purchases were categorized in 250-calorie increments (750, 1000, 1250) to examine the overall distribution. SPSS version 15.0 Complex Samples module (SPSS Inc, Chicago, Illinois) was used for all statistical analyses. A 2-tailed t test ($\alpha < 0.05$) was used to test for differences in mean calories. For bivariate tables, the χ^2 test was used to obtain P values.

RESULTS

We excluded 18 (9.7%) of the 185 sampled sites: 7 were located in nonpublic spaces (e.g., airport, mall); 8 were closed; 2 shared names but not affiliations with sampled chains; 1 had noncooperative management; and 1 yielded

RESEARCH AND PRACTICE

TABLE 1—Sample Distribution, Mean Calories, and Percentage of Purchases With 1000 or More and 1250 or More Calories, by Fast-Food Chain Type and for Subway: New York City, 2007

Chain type ^a	Sites, No.	Valid Receipts, No.	Calories, Mean (SE)	Calories Purchased	
				≥ 1000 Calories, %	≥ 1250 Calories, %
Burgers	75	3857	856.8 (10.8)	38.6	16.5
Chicken	14	649	931.3 (20.7)	47.5	18.0
Pizza	17	272	765.8 (115.0)	20.6	15.1
Sandwiches	49	1989	733.6 (16.2)	20.0	8.8
Tex-Mex	3	96	899.7 (60.1)	41.7	17.7
Colocated chains ^b	9	455	860.9 (24.0)	35.6	16.9
Total	167	7318	827.4 (10.7)	33.5	14.5
Subway patrons only					
All patrons	47	1830	749.2 (13.9)	21.3	9.4
Customer did not see posting ^c	...	1237	765.5** (16.6)	23.0	10.3*
Customer saw posting ^c	...	568	713.8** (15.5)	17.4	7.4*
Posting had effect on purchase ^c	...	200	646.9*** (19.4)	12.0*	4.0*
Posting had no effect on purchase ^c	...	341	745.8*** (17.0)	20.2*	9.1*

^aChain type definitions: Burger = Burger King, McDonald's, Wendy's; Chicken = Kentucky Fried Chicken (KFC), Popeye's; Pizza = Domino's, Papa John's, Pizza Hut; Sandwiches = Au Bon Pain, Subway; Tex-Mex = Taco Bell; Colocated = KFC/Taco Bell, Pizza Hut/Taco Bell, KFC/Pizza Hut, Burger King/Popeye's.

^bColocated chains refer to store locations with 2 or more chains sharing a retail space; receipts from these locations could include items from either or both chains.

^cSelf-reported.

* $P < .05$; ** $P < .01$; *** $P < .001$.

no valid receipts. From the remaining 167 sites, 7750 receipts and surveys were collected, of which 432 (5.6%) were excluded because the purchase was for someone other than the patron, the receipt was from a non-sampled fast-food chain, or the receipt listed 1 or more items with an undetermined caloric value. Because of logistical challenges, restaurant outlets with a high volume of customer traffic (> 150 patrons during the survey period) had lower rates of survey participation (33.3%) than did lower-volume sites (60.2%); overall participation was 55.2%.

Patrons purchased a mean of 827 calories, with 34% purchasing 1000 calories or more, and 15% purchasing 1250 calories or more (Table 1). Chicken chain patrons purchased the most calories, and sandwich chain patrons purchased the fewest calories.

Reported Observation of Calorie Information

Ninety-eight percent (7152 of 7318) of respondents answered the survey question

assessing observation of calorie information. Excluding Subway patrons, only 4% of patrons reported seeing calorie information as currently provided. Subway patrons were much more likely to report seeing calorie information than were patrons of other chains (32% vs 4%; $P < .001$).

Among Subway patrons, those who reported seeing calorie information purchased 52 fewer calories than those reporting not seeing calorie information (mean calories: 714 vs 766; $P < .01$), and fewer purchased higher-calorie meals (17% vs 23% purchased ≥ 1000 calories; $P < .01$; and 7% vs 10% purchased ≥ 1250 calories; $P < .05$). Of Subway patrons who reported seeing calorie information, 37% reported that this information had an effect on their purchases. Those who reported seeing and using calorie information purchased 99 fewer calories than those who reported seeing the information and that it had no effect (mean calories: 647 vs 746; $P < .001$). These patrons were also less likely to purchase 1250 or more calories

(4% v. 9%; $P < .03$; Table 1). There was no significant difference in mean calories purchased by patrons reporting seeing but not using calorie information and patrons who reported not seeing calorie information (mean calories: 746 vs 766; $P = .29$).

DISCUSSION

Despite its public availability, the number of food service establishment patrons (excluding Subway patrons) who reported seeing calorie information was very low. This finding is consistent with previous studies.^{6,7} In comparison, Subway's placement of limited calorie information on deli cases near the registers, although not prominent, was associated with a much higher proportion of patrons seeing calorie information. Furthermore, over one third of these Subway patrons reported that this information affected their purchase. Objective measurement of calorie content through examination of receipts confirmed that patrons who reported seeing and using calorie information purchased fewer calories than did those reporting that they did not see or use calorie information.

The importance of providing calorie information is supported by the finding that patrons purchased foods with high-energy contents: one third of patrons purchased more than 1000 calories for a single meal. Caloric intake is rising in the United States in parallel with the obesity epidemic: between 1971 and 2000, Americans' average daily caloric intake increased approximately 200 to 300 calories.^{1,8,9} Fast food, which represents approximately 74% of all restaurant traffic nationally (marketing research data; The NPD Group/CREST, written communication, October 2007), typically contains more calories per serving than does food prepared at home.^{12,4}

New York City and several other jurisdictions have considered requiring fast-food chains to post calorie information on their menus and menu boards.¹⁰ In this study, which was limited to chains that made calorie information publicly available, few patrons (less than 5%) saw calorie information when it was provided only in less-prominent formats, such as charts on counter mats,

RESEARCH AND PRACTICE

distant walls or posters, or on a Web site. The percentage was higher (32%) at Subway, which displayed information near the point of purchase. This suggests that displaying calorie information even more prominently, such as on menu boards, might increase the proportion of patrons seeing—and using—calorie information.

Our findings regarding the association of caloric content of purchases with observation of calorie information are subject to at least 3 limitations. First, Subway patrons might not be representative of all chain restaurant patrons: Subway patrons purchased fewer calories than did other chains' patrons. This could indicate that food available at Subway was lower in calories or that Subway patrons were more likely to purchase food with fewer calories than other chains' patrons. However, even when the analysis was restricted solely to Subway patrons, those seeing calorie information purchased fewer calories. Furthermore, Subway is the largest noncoffee fast-food chain in New York City, and its popularity suggests broad appeal; it is likely that if other chains were to make calorie information visible at point of purchase, patrons at these chains would be interested in and use calorie information to make healthier choices.

Second, it is possible that Subway patrons who reported seeing calorie information did so because they were more concerned about weight than were Subway patrons who reported not seeing calorie information. However, patrons who reported seeing but not using calorie information and patrons who reported not seeing calorie information purchased similar calories, indicating comparable purchasing patterns.

Third, study respondents may have differed from patrons choosing not to participate. However, data were collected over the busy lunch period, and the proportion of participants providing receipts varied primarily by consumer traffic volume, suggesting that individual patron factors were not major determinants of participation rates. Overall, this report's findings suggest that when fast-food chain patrons are provided calorie information prominently prior to purchase, many will see it and use it to reduce their caloric intake.

Given the frequency of fast food consumption, even modest reductions in calories (e.g., 50 calories per meal) could significantly reduce population-level caloric intake.^{11,12} However, the vast majority of patrons purchasing fast food do not have ready access to the information needed to make healthy decisions. In December 2006, the New York City Board of Health mandated posting calorie information on restaurant menus and menu boards. This mandate was legally challenged and overturned in September 2007. In January 2008, the New York City Board of Health approved a new mandate addressing the concerns raised by the legal ruling, to which there was again a challenge. The challenge was rejected by the courts, and an appeal has been made to a higher court.

The per-meal caloric content of fast-food purchases is high. Although fast-food restaurants report publishing nutritional information publicly, most chains' current methods of providing this information to patrons are ineffective. Placement of calorie information at point of purchase is more effective and may be associated with lower calorie purchases among consumers reporting seeing information. Public health authorities and restaurant establishments should consider interventions to make calorie information more prominently displayed at point of purchase to increase information, reduce calorie intake, and reduce obesity-related morbidity and mortality. ■

About the Authors

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Contributors

M.T. Bassett, T. Dumanovsky, L.D. Silver, C. Young, T.D. Matte, and T.R. Frieden were responsible for study concept and design. C. Huang supervised data collection, and analyzed and interpreted the data along with M.T. Bassett, T. Dumanovsky, S. Chideya, and T.R. Frieden. M.T. Bassett, T. Dumanovsky, and S. Chideya drafted the article. M.T. Bassett, L.D. Silver,

C. Nonas, and T.R. Frieden were responsible for reviewing the article for intellectual content. T.D. Matte provided statistical expertise. T. Dumanovsky and T.D. Matte supervised the study.

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Human Participant Protection

The study protocol was determined to be exempt by the institutional review board for the Department of Health and Mental Hygiene.

References

1. Lin B, Guthrie J, Frazao E. Nutrient contribution of food away from home. In: Frazao, ed. *America's Eating Habits: Changes and Consequences*. Washington, DC: US Dept of Agriculture; 1999:213–242.
2. Bowman S, Vinyard B. Fast food consumption of US adults: impact on energy and nutrient intakes and overweight status. *J Am Coll Nutr*. 2004;23:163–168.
3. Kant A, Graubard B. Eating out in America, 1987–2000: trends and nutritional correlates. *Prev Med*. 2004;38:243–249.
4. Bowman S, Gortmaker S, Ebbeling C, Pereira M, Ludwig D. Effects of fast food consumption on energy intake and diet quality among children in a national household survey. *Pediatrics*. 2004;113:112–118.
5. McCrory M, Fuss P, Hays N, Vinken A, Greenberg A, Roberts S. Overeating in America: association between restaurant food consumption and body fatness in healthy adult men and women ages 19 to 80. *Obes Res*. 1999;7:564–571.
6. Burton S, Creyer E, Kees J, Huggins K. Attacking the obesity epidemic: the potential health benefits of providing nutrition information in restaurants. *Am J Pub Health*. 2006;96(9):1669–1675.
7. Wootan M, Osborn M. Availability of nutrition information from chain restaurants in the United States. *Am J Prev Med*. 2006;30:266–268.
8. Putnam J, Allshouse J, Kantor L. US per capita food supply trends: more calories, refined carbohydrates and fats. *Food Rev*. 2002;25:2–15.
9. Wright J, Kennedy-Stephenson J, Wang C, McDowell M, Johnson CL. Trends in intake of energy and macronutrients: United States, 1971–2000. *MMWR Morb Mortal Wkly Rep*. 2004;53(4):80–82.
10. Center for Science in the Public Interest. Menu labeling: you have the right to know. Available at: http://www.cspinet.org/nutritionpolicy/policy_options.html#NutritionLabeling. Accessed November 27, 2007.
11. Veerman J, Barendregt J, Beeck Ev, Seidell J, Mackenbach J. Stemming the obesity epidemic: a tantalizing prospect. *Obesity*. 2007;15 2365–2370.
12. Hill J, Wyatt H, Reed G, Peters J. Obesity and the environment: where do we go from here? *Science*. 2003;299:853–855.